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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/830,187	04/21/2004	Robert Riley	040009	7718

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QUALCOMM INCORPORATED		
5775 MOREHOUSE DR.		
SAN DIEGO, CA 92121		

EXAMINER	
TRINH, TAN H	

ART UNIT	PAPER NUMBER
2618	

NOTIFICATION DATE	DELIVERY MODE
08/20/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com
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Office Action Summary

Application No.

10/830,187

Applicant(s)

RILEY ET AL.

Examiner

TAN TRINH

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 11-17, 22-26, 31-37 and 42 is/are rejected.
- 7) ☒ Claim(s) 7-10, 18-21, 27-30 and 38-41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 10-07-2005, the information disclosure statement has been considered by the examiner.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 11-17, 22-26, 31-37 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasting (U.S. Pub. No. 2005/0209789) in view of Challa (U.S. Pub. No. 2003/0067898).

Regarding claims 1, 12, 23, and 32, Hastings teaches an apparatus for detecting a local maximum in a two-dimensional data set (32) (see fig. 4), wherein the data set is represented by a stream of data elements (see page 3, section [0028]), the apparatus comprising: first detection logic that receives the data stream and operates to detect a first data element that represents a peak in a first dimension of the data set (see fig. 3, page 3, sections [0024-0031]), and second detection logic that receives the data stream and operates to detect a second data element that represents a peak in a second dimension of the data set (see fig. 3-4, page 4-5, sections [0032-0040]). But Hastings does not mention the local is detected if the first and second data elements are the same element (peak detector).

However, Challa teaches the local is detected if the first and second data elements are the same element (peak detector) (see fig. 3-4, 6, peak detector 432, page 4, section [0055]). In this case, the searcher search for full range of frequency bins and detected the peaks and evaluation and selected the maximum peak data and the peaks detector will detect first and second data with same elements from peak detector.

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above teaching of Hastings with Challa, in order to perform a search for peaks over the designated code space, and pull-in sub-stage performs acquisition of candidate peaks over frequency errors (see suggested by Challa on page 5, section [0065]).

Regarding claims 2, 13, 24 and 33, Hastings teaches a logic to process the data set to produce the stream of data elements (see page 3, section [0028]).

Regarding claims 3, 14 and 34, Challa teaches the first detection logic further comprises flag logic to associate a flag with the first data element (see page 3, section [0046] and see fig. 3-4, 6, peak detector 432, page 4, section [0055]). In this case, the flag logic for flagging is the indication of the strength found in the multi-path with strong signal, than indicates the interesting on, that is obvious to the flagging, and the searcher search for full range of frequency bins and detected the peaks and evaluation and selected the maximum peak data and the peaks detector will detect first and second data with same elements from peak detector.

Regarding claims 4, 15 and 35, Challa teaches the second detection logic further comprises logic to process the flag to determine if the first and second data elements are the same element (see page 3, section [0046]). In this case, the flag logic for flagging is the indication of the strength found in the multi-path with strong signal, than indicates the interesting on, that is obvious to the flagging.

Regarding claims 5, 16, 25 and 36, Challa teaches the output logic that outputs information about the local maximum (see fig. 9, the pilot detection with output information of the maximum signal information, page 7, section [0086]).

Regarding claims 6, 17, 26 and 37, Hastings teaches the information about the local maximum comprises an identifier that identifies a location of the local maximum in the data set (see page 4-5, sections [0038]).

Regarding claims 11, 22, 31 and 42, Hastings teaches the two-dimensional data set comprises rows and columns of data elements, and wherein the first dimension of the data set is defined by the number of columns, and the second dimension of the data set is defined by the number of rows (see fig. 4, page 3, sections [0028-0029]).

Allowable Subject Matter

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4. Claims 7-10, 18-21, 27-30, and 38-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for allowance

5. The following is an examiner's statement of reasons for allowance:

Regarding dependent claims 7, 18, 27 and 38, Hastings and Challa and the prior art of record fail to disclose, wherein the first detection logic comprises first register logic that operates to receive the data stream and output selected data elements that are adjacent in the first dimension of the data set as specified in dependent claims 7, 27 and 38.

Regarding dependent claims 9, 20, 29 and 40, Hastings and Challa and the prior art of record fail to disclose, wherein the second detection logic comprises register logic that operates to receive the data stream and output selected data elements that are adjacent in the second dimension of the data set as specified in dependent claims 9, 18, 29 and 40.

Conclusion

6. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(571) 273-8300, (for Technology Center 2600 only)

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*Hand-delivered responses should be brought to the Customer Service Window (now located at the **Randolph Building, 401 Dulany Street, Alexandria, VA 22314**).*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (571) 272-7888. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Anderson, Matthew D., can be reached at (571) 272-4177.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is (703) 306-0377.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tan H. Trinh
Division 2618
August 13, 2007

PATENT EXAMINER
TRINH, TAN

